MicroGenesis INDIGIS Thin Client Suite

An Integrated GIS and Image Processing Software

INDIGIS (Indigenous Geographical Information System) is a suite of GIS components, developed indigenously by Centre for Artificial Intelligence and Robotics (CAIR) Bangalore. **MicroGenesis** has been awarded the **technology transfer of INDIGIS** by DRDO.

INDIGIS solves the most challenging demands in GIS and Image Processing analysis and visualization environment which enabled geospatial professionals to solve real world problems faster and more efficient than ever before.

The **INDIGIS** SDK has roughly **500+ API's** which can be used to
- Develop new geospatial applications,
- Generate intelligent business products, or
- Customize your output for any number of market demands.

INDIGIS component suite is a set of GIS libraries, which are customizable, scalable and data centric, and can be customized to build Defense and non-Defense GIS applications to facilitate in planning, executing and supporting of operations.

INDIGIS allows users to **combine geographic data from different sources, in different formats**, and with different map projections, all into single environment that helps to perform complex queries on spatial, attribute and elevation data from various sources, and produce **numerous views of highly sophisticated maps.**

INDIGIS supports opening of **map files of various formats and map data from RDBMS (Oracle Spatial or PostGIS).** Users can access the map data by creating connections to the corresponding file or database. The geospatial functions are optimized for performance and accuracy and are integrated to support image analysis functionalities and improves user's workflows.

PRODUCT DATUM

Thin Client Product Features	
Core GIS Component	In memory models corresponding to Geometry, Symbology, Feature Object, Feature Layer classes and interfaces. IndiGIS offers flexible, customizable, integrable and inter-operable GIS modules to create intuitive maps with add on feature for the user to tailor specific requirements.
Map Display	Generating map views from the data loaded from the spatial database and map interaction operations. Functionalities like legend creation (North Arrow, Scale Bar, and Feature Legend) are part of this module.
Query Analysis	APIs for spatial, attribute, nearest neighbour queries, buffer creation, spatial computations etc.
Layer Management	Functionalities for management of user created layers (overlays) are handled by this module. A repository of Mil Symbol library (SVG, PNG format) with attribute information is stored as metadata.
Map Projection & Coordinate System	Implements spatial reference system transformations corresponding to most of the standard map projection algorithms and supports on the fly projection of raster and vector data.

Prerequisite Hardware / Software to be provided by end-users	
CPU configuration requirements	Intel / AMD x86 64 Bit Min 2.2 GHz minimum
Minimum Hard Disk Space Required in GB	4 GB
Minimum RAM Size required in GB	8 GB
Operating System	Windows (XP, 7 etc) and above or Linux (RHEL, Fedora, Ubuntu)
Database	Oracle, DB2, PostgreSQL, MSSQL, SQL, Postgres,Informix
Spatial Data	Oracle Spatial or PostGIS database.

Key Features

- Customizable GIS components which are data centric, scalable and reusable
- Support for commonly used map and image data formats
- Geo-database with various RDBMS (Native flat files, PostGIS, Oracle Spatial)
- On the fly projection map data with read outs (LLA, ENA, IMGR, GEOREF)
- Seamless integrated visualization and analysis of topographic and hydrographic data
- Going Map updation and analysis
- Processing of geo-spatial data in various standard formats

- Query analysis of geo-spatial data in 2D and 3D
- Visualization of geo-spatial data in 2D and 3D
- Creation and management of user created spatial data layers (overlays)

Benefits

- 100% indigenous GIS software Technology developed by Centre for Artificial Intelligence & Robotics (CAIR), DRDO Lab
- Only Indigenous Military GIS Product developed in the country
- Only Military GIS platform having end to end GIS, Image Processing, Analysis & Visualization capabilities in an Integrated platform
- Single UI for GIS, image Processing Capabilities, 3D GIS and other advance extension makes it quite suitable for all kinds of user needs right from basic level to advance level
- Easier to address any core level customization requirement as complete technology is available with MicroGenesis
- Since INDIGIS is indigenous technology developed by DRDO, in case of any eventuality, there is no threat to continuity of projects implemented on INDIGIS specifically if it is of national importance or in critical sectors like defence and Government

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